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WHAT IS CLAIMED IS:

1.   A method for selecting one of a plurality of codecs for a communication session, the method comprising the following steps performed by an endpoint participating in the communication session:

receiving a plurality of assessment packets;

determining at least one network parameter based on the assessment packets;

selecting one of a plurality of codecs using the at least one network parameter; and

communicating media using the selected codec.

2.   The method of Claim 1, wherein the assessment packets comprise a plurality of real-time transfer control protocol (RTCP) packets without media.

3.   The method of Claim 1, wherein the at least one network parameter comprises packet loss and delay.

4.   The method of Claim 1, wherein selecting one of a plurality of codecs comprises:

retrieving pre-stored codec selection data that associates the at least one network parameter to a corresponding codec; and

selecting the corresponding codec using the pre-stored codec selection data.

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5.   The method of Claim 1, further comprising:

monitoring the at least one network parameter; and

selecting a new codec from the plurality of codecs in response to a change in the at least one network
5   parameter.

6.   The method of Claim 1, further comprising:

requesting additional bandwidth if the selected codec requires more bandwidth; and
10   releasing excess bandwidth if the selected codec requires less bandwidth.

7.   The method of Claim 1, wherein the selected codec requires less bandwidth, and further comprising
15   retaining excess reserved bandwidth to facilitate a potential switch to a codec requesting more bandwidth than the selected codec.

8.   The method of Claim 1, wherein the selected
20   codec requires more bandwidth which is unavailable, and further comprising:

storing the at least one network parameter as a first network parameter;

receiving a plurality of second assessment packets
25   using the selected codec;

determining at least one second network parameter based on the assessment packets; and

comparing the first network parameter to the second network parameter to determine whether to switch to the
30   selected codec.

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9.   The method of Claim 1, further comprising:

reserving, at the initiation of the communication session, a sufficient bandwidth for the least bandwidth efficient codec supported by the endpoint; and

5   maintaining   the   reservation   of   the   sufficient bandwidth when the selected codec requires less than the sufficient bandwidth.

10.   The method of Claim 1, further comprising:

10   communicating   a   plurality   of   additional   assessment packets to a remote location; and

wherein the step of selecting comprises negotiating with the remote endpoint to select a codec.

15   11.   The method of Claim 1, wherein:

the media comprises voice information; and

the   at   least   one   network   parameter   comprises   a network parameter that impacts voice quality experienced by a user participating in the communication session.

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12.   The   method   of   Claim   1,   wherein   the   codecs implement at least a selected one of a G.711, G.723, and G.729 voice compression standard.

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13. An apparatus for selecting one of a plurality of codecs for a communication session, comprising:

a network interface operable to receive a plurality of assessment packets;

5   a plurality of codecs;

a processor coupled to the network interface and the codecs, the processor operable to determine at least one network parameter based on the assessment packets, the processor further operable to select one of a plurality

10   of codecs using the at least one network parameter.

14. The apparatus of Claim 13, wherein the assessment packets comprise a plurality of real-time transfer control protocol (RTCP) packets without media.

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15. The apparatus of Claim 13, wherein the at least one network parameter comprises packet loss and delay.

16. The apparatus of Claim 13, further comprising a

20   memory operable to store codec selection data that associates the at least one network parameter to a corresponding codec, wherein the processor is operable to select the corresponding codec using the stored codec selection data.

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17. The apparatus of Claim 13, wherein the processor is further operable to:

monitor the at least one network parameter; and

select a new codec from the plurality of codecs in
5   response to a change in the at least one network
parameter.

18. The apparatus of Claim 13, wherein the processor is further operable to:
10   request additional bandwidth if the selected codec requires more bandwidth; and

release excess bandwidth if the selected codec requires less bandwidth.

15   19. The apparatus of Claim 13, wherein the selected codec requires less bandwidth, and the apparatus retains excess reserved bandwidth to facilitate a potential switch to a codec requesting more bandwidth than the selected codec.

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20.   The apparatus of Claim 13, wherein the selected codec requires more bandwidth which is unavailable, and the processor is operable to:

store the at least one network parameter as a first
5   network parameter;

determine at least one second network parameter based on a plurality of second assessment packets received using the selected codec; and

compare the first network parameter to the second
10   network parameter to determine whether to switch to the selected codec.

21.   The apparatus of Claim 13, wherein the processor is further operable to:
15   reserve, at the initiation of the communication session, a sufficient bandwidth for the least bandwidth efficient codec supported by the endpoint; and

maintain the reservation of the sufficient bandwidth when the selected codec requires less than the sufficient
20   bandwidth.

22.   The apparatus of Claim 13, wherein:
the media comprises voice information; and
the at least one network parameter comprises a
25   network parameter that impacts voice quality experienced by a user participating in the communication session.

23.   The apparatus of Claim 13, wherein the codecs implement at least a selected one of a G.711, G.723, and
30   G.729 voice compression standard.

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24. Logic encoded in media for selecting one of a plurality of codecs for a communication session, the logic operable to perform the following steps:

receiving a plurality of assessment packets;

5   determining at least one network parameter based on the assessment packets;

selecting one of a plurality of codecs using the at least one network parameter; and

communicating media using the selected codec.

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25. The logic encoded in media of Claim 24, wherein the assessment packets comprise a plurality of real-time transfer control protocol (RTCP) packets without media.

15   26. The logic encoded in media of Claim 24, wherein the at least one network parameter comprises packet loss and delay.

27. The logic encoded in media of Claim 24, wherein

20   selecting one of a plurality of codecs comprises:

retrieving pre-stored codec selection data that associates the at least one network parameter to a corresponding codec; and

selecting the corresponding codec using the pre-

25   stored codec selection data.

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28.   The logic encoded in media of Claim 24, further comprising:

monitoring the at least one network parameter; and

selecting a new codec from the plurality of codecs
5   in response to a change in the at least one network
parameter.

29.   The logic encoded in media of Claim 24, further comprising:

10   requesting   additional   bandwidth   if   the   selected
codec requires more bandwidth; and

releasing excess bandwidth if the selected codec
requires less bandwidth.

15   30.   The logic encoded in media of Claim 24, wherein
the selected codec requires less bandwidth, and further
comprising   retaining   excess   reserved   bandwidth   to
facilitate a potential switch to a codec requesting more
bandwidth than the selected codec.

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31. The logic encoded in media of Claim 24, wherein the selected codec requires more bandwidth which is unavailable, and further comprising:

storing the at least one network parameter as a

5   first network parameter;

receiving a plurality of second assessment packets using the selected codec;

determining at least one second network parameter based on the assessment packets; and

10   comparing the first network parameter to the second network parameter to determine whether to switch to the selected codec.

32. The logic encoded in media of Claim 24, further

15   comprising:

reserving, at the initiation of the communication session, a sufficient bandwidth for the least bandwidth efficient codec supported by the endpoint; and

maintaining the reservation of the sufficient

20   bandwidth when the selected codec requires less than the sufficient bandwidth.

33. The logic encoded in media of Claim 24, further comprising:

25   communicating a plurality of additional assessment packets to a remote location; and

wherein the step of selecting comprises negotiating with the remote endpoint to select a codec.

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34. The logic encoded in media of Claim 24, wherein:

the media comprises voice information; and

the at least one network parameter comprises a

5 network parameter that impacts voice quality experienced by a user participating in the communication session.

35. The logic encoded in media of Claim 24, wherein the codecs implement at least a selected one of a G.711,

10 G.723, and G.729 voice compression standard.

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36.   An apparatus for selecting one of a plurality
of codecs for a communication session, the apparatus
comprising:

means   for   receiving   a   plurality   of   assessment
5   packets;

means for determining at least one network parameter
based on the assessment packets;

means for selecting one of a plurality of codecs
using the at least one network parameter; and

10   means for communicating media using the selected codec.

37. The   apparatus   of   Claim   36,   wherein   the
assessment packets comprise a plurality of real-time
transfer control protocol (RTCP) packets without media.

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38.   The apparatus of Claim 36, wherein the at least
one network parameter comprises packet loss and delay.

39.   The apparatus of Claim 36, wherein:

20   the media comprises voice information; and

the   at   least   one   network   parameter   comprises   a
network parameter that impacts voice quality experienced
by a user participating in the communication session.

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